WHAT IS CLAIMED IS:

1. An electro-mechanical system comprising:

a first surface;

an electrically activated electrode coupled to the first surface, the electrically activated electrode being coupled to an electrical source to receive a first electrical signal;

a moveable structure suspended at a first height over the first surface, the moveable structure being attracted toward the electrically activated electrode based upon the first signal, the moveable structure being attracted toward the first surface through an interaction with one or more parasitic forces; and

a landing post coupled to a lower side of the moveable structure, the landing post having a plurality of side surfaces defined by a height, a width, and a length and a lesser surface associated with a base, the landing post being adapted to contact the base of the landing post against the first surface when the electrically activated electrode receives a predetermined voltage bias associated with the first signal, thereby maintaining an outer portion of the moveable structure and the greater surface of the landing post free from physical contact with the first surface and reducing a magnitude of the one or more parasitic forces.

2. The electro-mechanical system of claim 1 wherein a portion of an upper surface of the moveable structure is adapted to reflect incident radiation.

3. The electro-mechanical system of claim 2 wherein the portion of the upper surface of the moveable structure is characterized by a power reflectance greater than or equal to 90%.

4. The electro-mechanical system of claim 1 wherein the landing post bends when it makes contact with the first surface.

5. The electro-mechanical system of claim 4 wherein the bending of the landing post generates a force opposed to the one or more parasitic forces.

6. The electro-mechanical system of claim 1 wherein the landing post is manufactured from the group comprising silicon, polysilicon, metal, and dielectric materials.

7. The electro-mechanical system of claim 1 wherein the landing post is electrically coupled to the moveable structure.

8. The electro-mechanical system of claim 1 further comprising a landing pad coupled to the first surface, the base of the landing post being adapted to contact the landing pad when the electrically activated electrode receives the predetermined voltage bias associated with the first signal.

9. The electro-mechanical system of claim 8 wherein the landing post and the landing pad are electrically coupled to the moveable structure.

10. The electro-mechanical system of claim 9 wherein the landing pad and the landing post are maintained at equal electrical potentials.

11. The electro-mechanical system of claim 8 wherein the landing pad is selected from the group comprising silicon, polysilicon, copper, titanium, aluminum, titanium nitride, and tungsten.

12. The electro-mechanical system of claim 8 wherein the landing pad is located at an outer edge of the electrically activated electrode.

13. An electro-mechanical system comprising:

a first surface;

a mounting structure extending in a direction perpendicular to the first surface;

a flexible member coupled to an upper portion of the mounting structure;

an electrically activated electrode coupled to the first surface, the electrically activated electrode being coupled to an electrical source to receive a first electrical signal;

a moveable structure coupled to the flexible member and suspended at a predetermined height over the first surface, the moveable structure being attracted toward the electrically activated electrode based upon the first electrical signal, the moveable structure being attracted toward the first surface through an interaction with one or more parasitic forces; and

at least one extension arm coupled to the moveable structure in a plane substantially coplanar with an upper surface of the moveable structure, the extension arm being adapted to contact the first surface when the electrically activated electrode receives a

predetermined voltage bias associated with the first electrical signal, thereby maintaining an outer portion of the moveable structure free from contact with the first surface and reducing a magnitude of the one or more parasitic forces.

14. The electro-mechanical system of claim 13 wherein a portion of an upper surface of the moveable structure is adapted to reflect incident radiation.

15. The electro-mechanical system of claim 14 wherein the portion of the upper surface of the moveable structure is characterized by a power reflectance greater than or equal to 90%.

16. The electro-mechanical system of claim 13 wherein the at least one extension arm bends when it makes contact with the first surface.

17. The electro-mechanical system of claim 16 wherein the bending of the at least one extension arm generates a force opposed to the one or more parasitic forces.

18. The electro-mechanical system of claim 13 wherein the at least one extension arm comprises an extended portion adjacent to a recessed portion, the recessed portion effectively lengthening the at least one extension arm.

19. The electro-mechanical system of claim13 wherein the at least one extension arm is manufactured from the group comprising silicon, polysilicon, metal, and dielectric materials.

20. The electro-mechanical system of claim13 wherein the at least one extension arm is electrically coupled to the moveable structure.

21. The electro-mechanical system of claim13 further comprising at least one landing pad coupled to the first surface, the at least one extension arm being adapted to contact the at least one landing pad when the electrically activated electrode receives the predetermined voltage bias associated with the first signal.

22. The electro-mechanical system of claim 21 wherein the at least one extension arm and the at least one landing pad are electrically coupled to the moveable structure.

23. The electro-mechanical system of claim 22 wherein the at least one landing pad and the at least one extension arm are maintained at equal electrical potentials.

24. The electro-mechanical system of claim 21 wherein the at least one landing pad is manufactured from the group comprising silicon, polysilicon, copper, titanium, aluminum, titanium nitride, and tungsten.

25. An electro-mechanical system comprising:

a first surface;

a mounting structure coupled to the first surface wherein the mounting structure extends to a first height above the first surface;

a flexible member coupled to the mounting structure;

a moveable structure suspended at a second height over the first surface, wherein the moveable structure is coupled to the flexible member;

at least one electrically activated electrode located opposite the moveable structure and coupled to the first surface, the at least one electrically activated electrode being coupled to an electrical source to receive a first electrical signal, wherein the moveable structure is attracted toward the at least one electrically activated electrode based upon the first electrical signal, the moveable structure being attracted toward the first surface through an interaction with one or more parasitic forces; and

a landing post coupled to a lower side of the moveable structure, the landing post being adapted to contact a portion of the mounting structure when the at least one electrically activated electrode receives a predetermined voltage bias associated with the first electrical signal, thereby maintaining an outer portion of the moveable structure free from physical contact with the first surface and reducing the magnitude of the one or more parasitic forces.

26. The electro-mechanical system of claim 25 wherein an upper surface of the moveable structure comprises a region adapted to reflect incident radiation.

27. The electro-mechanical system of claim 26 wherein the region adapted to reflect incident radiation is characterized by a power reflectance of greater than or equal to 90%.

28. The electro-mechanical system of claim 25 wherein the flexible member is a torsion spring.

29. The electro-mechanical system of claim 25 wherein the landing post bends when it makes contact with the mounting structure.

30. The electro-mechanical system of claim 29 wherein the bending of the landing post generates a force opposed to the one or more parasitic forces.

31. The electro-mechanical system of claim 25 wherein the landing post is manufactured from the group comprising silicon, polysilicon, metal, and dielectric materials.

32. The electro-mechanical system of claim 25 wherein the landing post is electrically coupled to the moveable structure.

33. The electro-mechanical system of claim 25 wherein the landing post and the support structure are maintained at equal electrical potentials.

34. An electro-mechanical system comprising:

a first surface;

a mounting structure coupled to the first surface wherein the mounting structure extends to a first height above the first surface;

a flexible member coupled to the mounting structure;

a moveable structure coupled to the flexible member and suspended at a second height over the first surface;

an electrically activated electrode located below the moveable structure and coupled to the first surface, the electrically activated electrode being coupled to an electrical source to receive a first electrical signal, wherein the moveable structure is attracted toward the electrically activated electrode based upon the first electrical signal, the moveable structure being attracted toward the first surface through an interaction with one or more parasitic forces;

at least one landing pad coupled to the first surface; and

at least one landing post coupled to a lower side of the moveable structure, the landing post having a plurality of side surfaces defined by a height, a width, and a length and a lesser surface associated with a base, the landing post being adapted to contact the base of

the landing post against the at least one landing pad when the electrically activated electrode receives a predetermined voltage bias associated with the first electrical signal, thereby maintaining an outer portion of the moveable structure free from physical contact with the first surface and reducing the magnitude of the one or more parasitic forces.

35. The electro-mechanical system of claim 34 further comprising at least one extension arm coupled to the moveable structure, the at least one extension arm being adapted to contact the at least one landing pad when the electrically activated electrode receives the predetermined voltage bias associated with the first electrical signal, thereby maintaining a portion of the outer portion of the moveable structure free from physical contact with the first surface and reducing the magnitude of the one or more parasitic forces.

36. The electro-mechanical system of claim 35 wherein the at least one extension arm comprises an extended portion flanked on either side by two recessed portions, the recessed portions effectively extending the length of the extension arm.

37. An electro-mechanical system comprising:

a first surface;

an electrically activated electrode coupled to the first surface, the electrically activated electrode being coupled to an electrical source to receive a first electrical signal;

a mounting structure coupled to the first surface;

a flexible member coupled to the mounting structure; and

a moveable structure coupled to the flexible member and suspended at a first height over the first surface, the moveable structure being attracted toward the electrically activated electrode based upon the first signal, the moveable structure being attracted toward the first surface through an interaction with one or more parasitic forces, the moveable structure being arrested in its motion toward the first surface by a portion of the flexible member interacting with the mounting structure when the electrically activated electrode receives a predetermined voltage bias associated with the first signal, thereby maintaining an outer portion of the moveable structure free from physical contact with the first surface and reducing a magnitude of the one or more parasitic forces.

38. An electro-mechanical system comprising:

a first surface;

a plurality of mounting structures coupled to the first surface wherein the mounting structures extend to at least a first height above the first surface;

a plurality of elastic members, at least one of the plurality of elastic members coupled to an associated one of the plurality of mounting structures;

a plurality of moveable structures suspended at a second height over the first surface, wherein at least one of the moveable structures is coupled to an associated one of the plurality of the elastic members;

a plurality of electrically activated electrodes coupled to the first surface,

a first number of the plurality of electrically activated electrodes being coupled to a first electrical source to receive a first electrical signal, wherein a third number of the plurality of the moveable structures are attracted toward the first number of the plurality of electrically activated electrodes based upon the first electrical signal, and

a second number of the plurality of electrically activated electrodes being coupled to a second electrical source to receive a second electrical signal, wherein a fourth number of the plurality of the moveable structures are repelled away from the second number of the plurality of electrically activated electrodes based upon the second electrical signal,

the plurality of moveable structures being attracted toward the first surface through an interaction with one or more parasitic forces; and

a landing post coupled to a lower side of the plurality of moveable structures, the landing post being adapted to contact the first surface when the first number of electrically activated electrodes receives a predetermined voltage bias associated with the first electrical signal and the second number of electrically activated electrodes receives a predetermined voltage bias associated with the second electrical signal, thereby maintaining an outer periphery of the moveable structure free from physical contact with the first surface and reducing the magnitude of the one or more parasitic forces.

39. The electro-mechanical system of claim 38 wherein an upper surface of the plurality of moveable structures comprises regions characterized by different values of reflectivity.

40. The electro-mechanical system of claim 38 wherein the plurality of moveable structures are arranged in a spatial pattern in the form of an array, such that a first one of the plurality of moveable structures creates a shadowed region on a second one of the

plurality of moveable structures when the first number of electrically activated electrodes receives a predetermined voltage bias associated with the first electrical signal and the second number of electrically activated electrodes receives a predetermined voltage bias associated with the second electrical signal, the moveable structure manufactured to align at least one region of low reflectivity with the shadowed region.

41. The electro-mechanical system of claim 40 wherein the at least one region of low reflectivity is a region characterized by power reflectance less than 90%.

42. A method of operating an electro-mechanical system comprising:

electrically activating an electrode with a first electrical signal;

generating an electric field of a first magnitude in the vicinity of the electrode;

rotating a moveable member to arrive at a first state in response to the electric field in the vicinity of the electrode;

initiating contact between a first surface and a landing post coupled to a lower surface of the moveable member;

electrically activating the electrode with a second electrical signal;

generating an electric field of a second magnitude in the vicinity of the electrode;

bending the landing post in response to the electric field of the second magnitude and generating a restoring force present in the landing post;

electrically activating the electrode with a third electrical signal; and

rotating the moveable member to a third state wherein the restoring force present in the landing post assists the rotation of the moveable member to the third state.

43. The method of claim 42 wherein the electric field of the second magnitude is greater than the electric field of the first magnitude.

44. The method of claim 42 wherein the restoring force present in the landing post overcomes parasitic forces present at the location where the first surface and the landing post are in contact.

45. The method of claim 42 wherein the third electrical signal reduces the electric field in the vicinity of the electrode.